



## Thirty-year survey on airborne pollen concentrations in Genoa, Italy: Relationship with sensitizations, meteorological data, and air pollution

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**Year:** 2011  
**Journal:** American Journal of Rhinology & Allergy. 25 (6): E232-E241

### Abstract:

**Background:** Pollen allergy represents a relevant health issue. Betulaceae sensitization significantly increased in Genoa, Italy, in the last decades. This study investigated possible relationships among pollen count, meteorological changes, air pollution, and sensitizations in this city during a 30-year period. **Methods:** Betulaceae, Urticaceae, Gramineae, and Oleaceae pollen counts were measured from 1981 to 2010 in Genoa. Sensitization to these pollens was also considered in large populations of allergic patients. Meteorological parameters and pollutants were also measured in the same area. **Results:** Betulaceae sensitization increased over time. All pollen species significantly increased over this time. Pollen season advanced for Betulaceae and Urticaceae. Only Urticaceae season significantly increased. Temperature increased while rainfall decreased over the time. Pollutants significantly decreased. There were some relationships between pollen changes and climatic and air pollution parameters. **Conclusion:** This 30-year study conducted in an urbanized area provided evidence that Betulaceae sensitization significantly increased, pollen load significantly augmented, and climate and air pollution changed with a possible influence on pollen release. (Am J Rhinol Allergy 25, e232-e241, 2011; doi:10.2500/ajra.2011.25.3729)

**Source:** <http://dx.doi.org/10.2500/ajra.2011.25.3729>

### Resource Description

#### Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Meteorological Factors, Meteorological Factors, Precipitation

**Air Pollution:** Allergens, Ozone, Particulate Matter, Other Air Pollution

**Air Pollution (other):** CO;SO;NOx

#### Geographic Feature:

resource focuses on specific type of geography

Urban

#### Geographic Location:

resource focuses on specific location

# Climate Change and Human Health Literature Portal

Non-United States

**Non-United States:** Europe

**European Region/Country:** European Country

**Other European Country :** Italy

**Health Impact:** ☒

specification of health effect or disease related to climate change exposure

Respiratory Effect, Other Health Impact

**Respiratory Effect:** Asthma, Upper Respiratory Allergy, Other Respiratory Effect

**Respiratory Condition (other) :** rhinitis

**Other Health Impact:** pollen sensitization

**Resource Type:** ☒

format or standard characteristic of resource

Research Article

**Timescale:** ☒

time period studied

Time Scale Unspecified